



COLUMBIA RIVER INTER-TRIBAL FISH COMMISSION

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TO: Technical Management Team (TMT)
FROM: Kyle Dittmer, *Hydrologist-Meteorologist*, CRITFC's Hydro Program
DATE: November 28, 2007

SUBJECT: **Summary of Water Year 2007 Weather**

At the request of the TMT, this memo summarizes monthly weather events that impacted basin flows and fish migrations during Water Year 2007 (October 2006 - September 2007). WY 2007 was noted for extreme variability in precipitation and temperature patterns (Figures 1 and 2).

Autumn started dry (except in the Upper Snake) then dived into a very wet November. During November 2nd -7th, 37 station records were broken. Western Oregon and Washington received as much precipitation as the February 1996 floods. Lee's Camp broke Oregon's all-time 24-hour rainfall record on Nov. 6th with 14.3 inches. Widespread major flooding and mudslides followed. Temperatures were near normal (+0.1 to +1.1), basin departures of -4.8 to +14.3 °F.

Winter started as cold, wet and ended warm, dry. The weak El Nino pattern had emerged. Powerful storms of late December and early January faded and meager storm events followed. Temperatures stayed near normal (-1.3 to +3.6) with basin departures of -10.5 to +8.5 °F.

Spring was boring, warm, and dry (with few exceptions). A powerful storm broke daily rain records on May 2, 3, 20, 21, 27 and 28, as well as June 4-6. New record highs (93 to 94 °F) were set on May 8th in the lower Snake. June 2nd-3rd had new basin-wide high records (86 to 101 °F). Temperatures stayed above normal (+0.4 to +1.6) with basin departures of -2.5 to +4.8 °F.

Summer was very warm and dry for migrating salmon. July set the highest average basin departure for WY 2007 with +5.9 °F and one of the hottest months ever for the Pacific Northwest. Record-breaking daily high temperatures hit July 5th-16th (92 to 116 °F) and August 29th-30th (95 to 105 °F). Temperatures stayed above normal (+0.8 to +5.9) with basin departures of -3.7 to +11.2 °F. Conditions moderated by September and the rain returned late month.

Cumulative precipitation totals for Water Year 2007 for Columbia at The Dalles ended at 94%. The driest basins of the Columbia (Figure 3) were the Grand Ronde (70%), Owyhee/Malheur (72%) & Snake River Plain (73%). The wettest basins were the Lower Deschutes & East Slope Wash. Cascades (107%), NW Wash. Cascades (106%), and Columbia above Castlegar (103%).

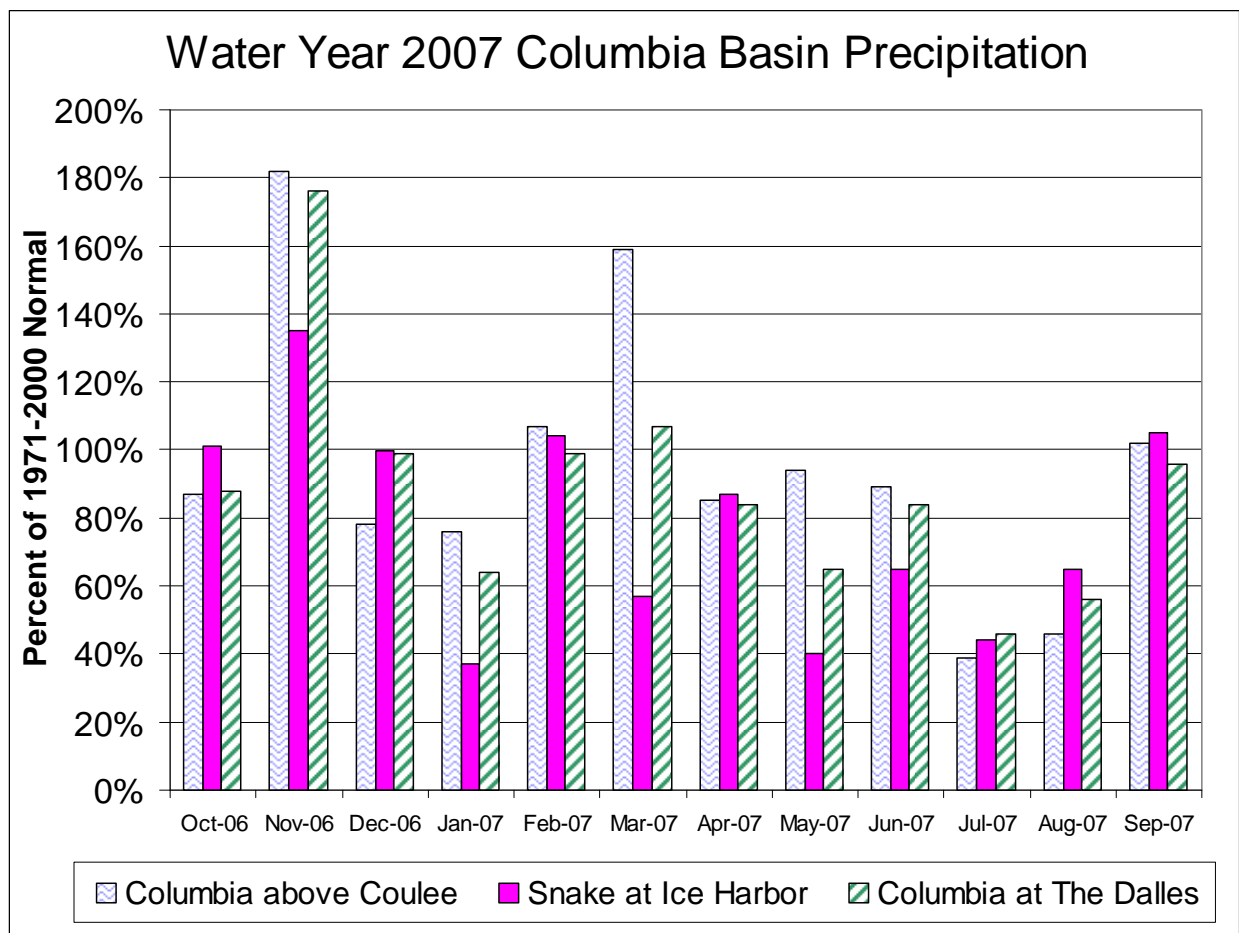


Figure 1. Water Year 2007 Division Precipitation Summary (NOAA-NWS data).

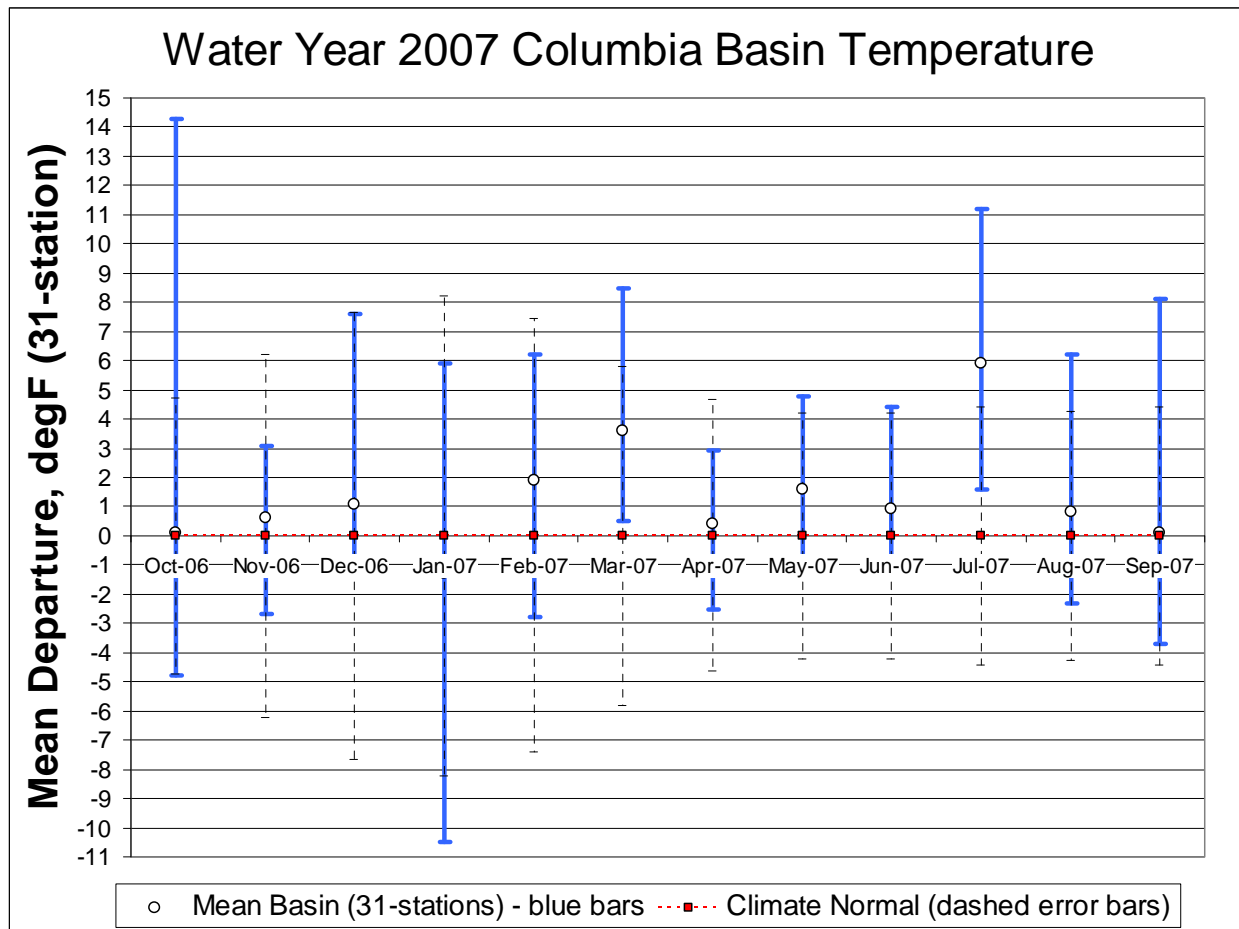


Figure 2. Water Year 2007 Temperature Departure Summary (NOAA-NWS data).

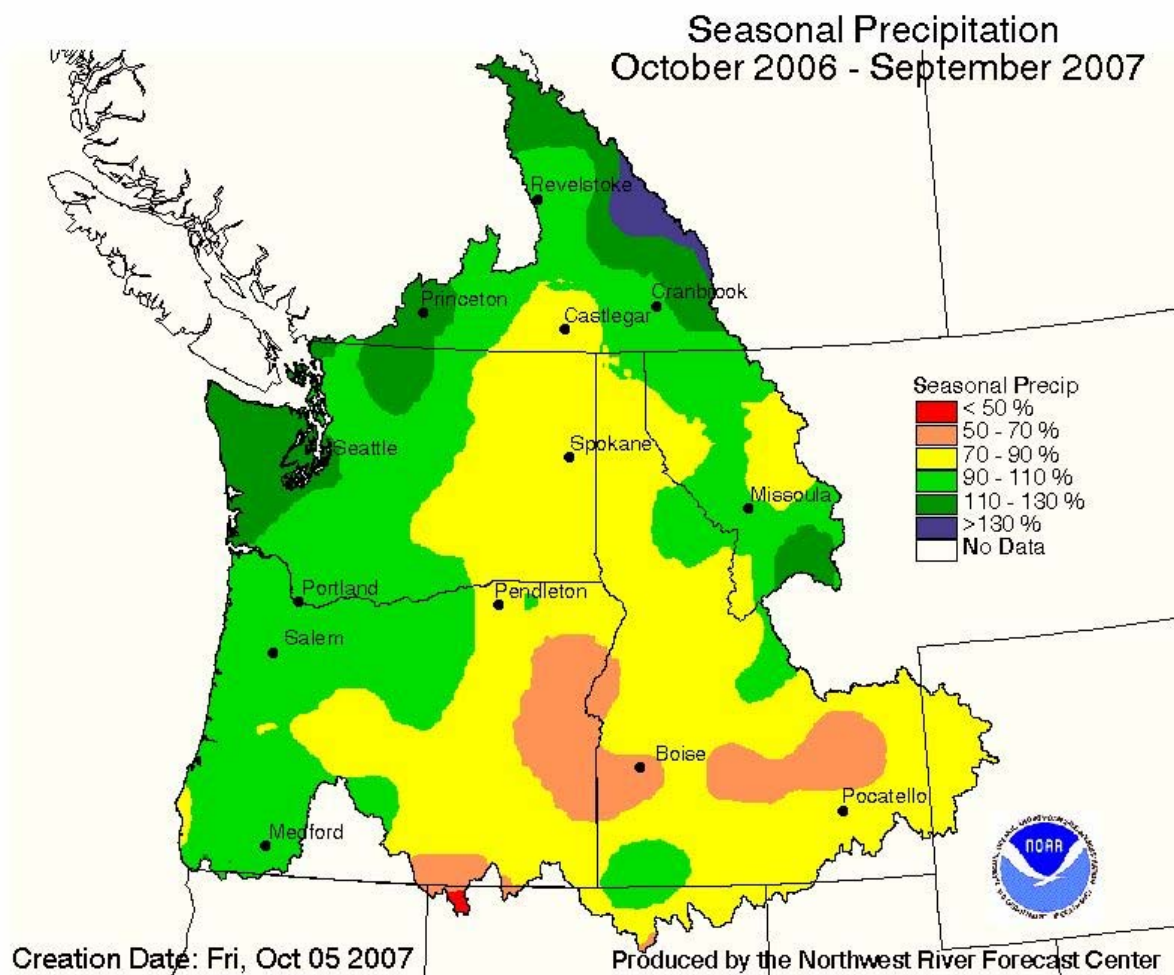


Figure 3. Water Year 2007 Columbia Basin Cumulative Seasonal Precipitation.